AMENDMENTS TO THE CLAIMS

Applicant submits below a complete listing of the current claims, including marked-up claims with insertions indicated by underlining and deletions indicated by strikeouts and/or double bracketing. This listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of the Claims

1. (Currently Amended) A method for providing access over a network to data and services available within a collaborative computer system, the collaborative system comprising a plurality of collaborative clients, ~~each collaborative client maintaining collaborative data based on user interactions with the collaborative system, the access being provided in response to a request message from a non-collaborative client, the request containing information identifying the non-collaborative client and~~ the method comprising:

a) maintaining, by each collaborative client, data based on user interactions with the collaborative system, the maintaining comprising, for each collaborative client, having a local copy of collaborative data and forwarding data change requests to other collaborative clients and using data change requests in modifying the local copy;

b) providing access to the collaborative data in response to a request message from a non-native client, the non-native client accessing the collaborative data other than through the collaborative system, the request message containing information identifying the non-native client;

c) receiving the request message in a server connected to the ~~non-collaborative~~ non-native client, extracting from the request message the information identifying the ~~non-collaborative~~ non-native client and modifying the request message by replacing the information identifying the non-collaborative client with information identifying a queue in the server, the queue being associated with the non-native client and the server;

[[b]]d) sending the modified request message to a collaborative client of the plurality of collaborative clients via the network, wherein the request message specifies collaborative data to update or return ~~collaborative data~~, and the collaborative client provides a response message based on the request message;

[[c]]e) sending the response message to the server queue identified in the modified request message, and

[[d]]f) using the information in the server identifying the ~~non-collaborative~~ non-native client to forward the response message from the server queue to the non-collaborative client.

2.   (Previously Presented) The method of claim 1 further comprising:

(e)   before step (a) is performed, the collaborative client publishing a convenient name associated with at least a portion of the data and services available within the collaborative computer system.

3.   (Previously Presented) The method of claim 2 wherein the request message includes the convenient name and step (a) comprises:

(a1) extracting from the request message the convenient name; and

(a2) using the convenient name to retrieve information identifying a location of the collaborative client that can provide the at least a portion of the data and services.

4.   (Currently Amended)   The method of claim [[1]] 2 wherein step (b) comprises:

(b1)   sending the modified request message directly to the collaborative client when the collaborative client is connected to the network; and

(b2)   sending the modified request message to a relay server when the collaborative client is not connected to the network.

5.   (Currently Amended) The method of claim 4 wherein the server is part of the relay server that connects the ~~non-collaborative~~ non-native client to the network.

6.   (Currently Amended) The method of claim [[1]] 4 wherein the server waits on the server queue after step (b) and wherein step (d) further comprises:

(d1) forwarding the response message from the server queue to the ~~non-collaborative~~ non-native client when the response message is received in the server queue.

7.　　(Currently Amended) The method of claim [[1]] 4 wherein the server does not wait for a response in step (b) and wherein step (d) is performed in response to a method call by the ~~non-collaborative~~ non-native client.

8.　　(Currently Amended) The method of claim 7 wherein the request message contains a unique request identifier and wherein the response message returns the unique request identifier to the ~~non-collaborative~~ non-native client and the ~~non-collaborative~~ non-native client compares the request identifier sent in the request message with the request identifier in the response message to determine if the response is associated with the request.

9.　　(Currently Amended) The method of claim [[1]] 4 further comprising:

(e)　　subscribing to an event service at the collaborative client indicating a request for notification of selected actions in the collaborative system; and

(f)　　the collaborative client placing event messages in the server queue when a selected action occurs.

10.　　(Currently Amended) The method of claim [[1]] 9 wherein:

the request and the response messages have a same protocol; and

the protocol is the Simple Object Access Protocol (SOAP).

11.　　(Canceled)

12.　　(Currently Amended) Apparatus for providing access over a network to data and services, ~~available within a collaborative computer system, the collaborative system comprising a plurality of collaborative clients, each collaborative client maintaining collaborative data based on user interactions with the collaborative system, the access being provided in response to a request message from a non-collaborative client the request containing information identifying the non-collaborative client and~~ the apparatus comprising:

a collaborative system comprising a plurality of collaborative clients, each collaborative client having a local copy of collaborative data and being adapted to forward data change requests to other collaborative clients and use data change requests in modifying the local copy;

an external client, the external client being external to the collaborative system and being adapted to send a request message, the request message containing information identifying the external client, wherein the collaborative system is adapted to provide access to the collaborative data in response to the request message;

a server connected to the ~~non-collaborative~~ external client, including means for receiving the request message, means for extracting from the request message the information identifying the ~~non-collaborative~~ external client and means for modifying the request message by replacing the information identifying the ~~non-collaborative~~ external client with information identifying a queue in the server, the queue being associated with the external client and the server;

a first communication mechanism for sending the modified request message to a collaborative client of the plurality of collaborative clients via the network, wherein the collaborative client provides a response message containing the data and services requested;

a second communication mechanism for storing the response message in the server queue identified in the modified request message, the queue being associated with the external client, and

a contact mechanism responsive to the information in the server identifying the ~~non-collaborative~~ external client for forwarding the response message from the server queue to the ~~non-collaborative~~ external client.

13. (Currently Amended) The apparatus of claim 12 further comprising means operable by the collaborative client for publishing a convenient name associated with selected data and services available in the collaborative computer system before the ~~non-collaborative~~ external client generates the request message.

14. (Original) The apparatus of claim 13 wherein the request message includes the convenient name and wherein the receiving means in the server comprises a mechanism for extracting from the request message the convenient name and a name service that is responsive to the convenient name for retrieving information identifying the location of the collaborative client that can provide the selected data and services.

15. (Original) The apparatus of claim 12 wherein the first communication mechanism comprises:

means for sending the modified request message directly to the collaborative client when the collaborative client is connected to the network; and

means for sending the modified request message to a relay server when the collaborative client is not connected to the network.

16.   (Currently Amended) The apparatus of claim 15 wherein the server is part of the relay server that connects the ~~non-collaborative~~ external client to the network.

17.   (Currently Amended) The apparatus of claim 12 wherein the server waits on the server queue after the first communication mechanism sends the request message to the collaborative client and wherein the contact mechanism comprises means for forwarding the response message from the server queue to the ~~non-collaborative~~ external client when the response message is received in the server queue.

18.   (Currently Amended) The apparatus of claim 12 wherein the server does not wait for a response in after the first communication mechanism sends the request message to the collaborative client and wherein the contact mechanism sends forwarding the response message from the server queue to the ~~non-collaborative~~ client in response to a method call by the non-collaborative client.

19.   (Currently Amended) The apparatus of claim 18 wherein the request message contains a unique request identifier and wherein the response message returns the unique request identifier to the ~~non-collaborative~~ external client and the ~~non-collaborative~~ external client comprises a comparator that compares the request identifier sent in the request message with the request identifier in the response message to determine if the response is associated with the request.

20.   (Currently Amended) The apparatus of claim 12 further comprising:
a subscription service responsive to a request from the ~~non-collaborative~~ external client for subscribing to an event service at the collaborative client indicating a request for notification of selected actions in the collaborative system; and
an event mechanism in the collaborative client that places event messages in the server queue when a selected action occurs.

21.　　(Currently amended)　The apparatus of claim 12 wherein:

the request and the response messages have the same protocol; and

the protocol is the Simple Object Access Protocol.

22.　　(Canceled)

23.　　(Currently Amended)　A computer program product for providing access over a network to data and services available within a collaborative computer system, the collaborative system comprising a plurality of collaborative clients, ~~each collaborative client maintaining collaborative data based on user interactions with the collaborative system, the access being provided in response to a request message from a non-collaborative, the request containing information identifying the non-collaborative client and~~ the computer program product comprising a tangible computer usable medium having computer readable program code thereon, including:

program code for maintaining, by each collaborative client, data based on user interactions with the collaborative system, the maintaining comprising, for each collaborative client, having a local copy of collaborative data and forwarding data change requests to other collaborative clients and using data change requests in modifying the local copy;

program code for providing access to the collaborative data in response to a request message from a non-native client the non-native client accessing the collaborative data other than through the collaborative system, the request containing information identifying the non-native client;

program code for receiving the request message in a server connected to the ~~non-collaborative~~ non-native client, extracting from the request message the information identifying the ~~non-collaborative~~ non-native client and modifying the request message by replacing the information identifying the ~~non-collaborative~~ non-native client with information identifying a queue in the server;

program code for sending the modified request message to a collaborative client in the collaborative computer system via the network, wherein the collaborative client provides a response message containing the data and services requested from the collaborative system;

program code for sending the response message to the server queue identified in the modified request message, and

program code for using the information in the server identifying the ~~non-collaborative~~ <u>non-native</u> client to forward the response message from the server queue to the ~~non-collaborative~~ <u>non-native</u> client<u>, the queue being associated with the non-native client and the server</u>.

24.   (Canceled)

25.   (New) The method of claim 10, wherein:

the request message identifies a specific collaborative client with a collaborative client identifier; and

the server:

performs a name lookup of the collaborative client identifier to determine a name look-up result for the collaborative client;

removes the collaborative client identifier from the message; and

adds the name lookup result to the message.

26.   (New) The method of claim 21, wherein the queue is identified with a generated device URL associated with a SOAP header.